

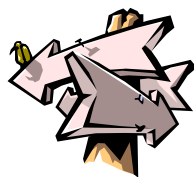


**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**Atlanta Federal Center**  
**61 Forsyth Street**  
**Atlanta, Georgia 30303-8960**

**Fact Sheet: Update on Remedial Investigation/Feasibility Study**  
**Kerr-McGee Chemical LLC Superfund Site**  
**Jacksonville, Florida** **November 2003**

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## **Background**



The Kerr-McGee Chemical LLC Site (Site) occupies approximately 31 acres at 1611 Talleyrand Avenue along the St. Johns River in Jacksonville, Duval County, Florida. The Site is located within a heavily industrialized area. Residential and commercial properties are also located in the vicinity of the Site. The property is bordered to the east by the St. Johns River, to the west by Talleyrand Avenue, to the north by the Port of Jacksonville marine terminal, and to the south by property owned by CSX Transportation.

From 1919 until 1970, various entities conducted pesticide and herbicide formulation operations and fertilizer and sulfuric acid manufacturing operations at the Site. Kerr-McGee purchased the Site in June of 1970 and operated two plants for the formulation, blending and packaging of pesticides, herbicides and fertilizers. In addition, Kerr-McGee produced sulfuric acid and operated a steel drum reconditioning facility at the Site. The Site closed in early 1978. All buildings have been demolished. Only three building foundations remain. The Site is fenced along its northern boundary and fenced/gated along Talleyrand Avenue. Warning signs have been posted.

## **EPA Enforcement Actions**

The Environmental Protection Agency (EPA) assumed jurisdiction of the Site in 1998 at the request of the Florida Department of Environmental Protection (FDEP). The EPA and Kerr-McGee signed an Administrative Order on Consent (AOC) in March 2000 for Kerr-McGee to conduct a Remedial Investigation/Feasibility Study (RI/FS). Under EPA oversight, Kerr-McGee is conducting additional sampling at the Site and evaluating alternatives for cleaning up the Site.

## **Remedial Investigation Update**

The objective of the Remedial Investigation is to determine the nature and extent of contamination at the Site and, based on that information, to evaluate possible risks to humans and plants/animals (i.e., the environment). The initial Remedial Investigation was conducted in two phases:

- 1) Land-based phase: Groundwater and soils were sampled in fall and winter of 2000.
- 2) River and sediment (i.e., material collected from under water) phase: The sediment was sampled in early 2001.

The EPA review of the results from the above two sampling phases concluded that further sampling was needed to completely determine where the contamination is located and how far

it has spread. This additional sampling was conducted from late spring 2002 to summer 2002, and again in late spring 2003.

In July of 2003, the draft Remedial Investigation Report for the above initial phases and the additional sampling was submitted to the EPA for review. At about the same time, the draft Risk Assessments, which use the Remedial Investigation sampling data, were also submitted. The draft Risk Assessments evaluate whether or not there is any harm from the contaminants, the potential for human or environmental exposure to the contaminants, what such exposure may cause to happen, and the risks the potential exposure places on humans and the environment.

## **Feasibility Study Update**

The objective of a Feasibility Study is to identify and evaluate methods for cleaning up Site contamination identified by the Remedial Investigation.

To support the detailed evaluation of cleanup alternatives, which will occur in the Feasibility Study, some Treatability Studies are needed. Treatability Studies determine possible ways to cleanup contamination related to the Site. These possible cleanup methods, along with others that do not require a Treatability Study, will then be evaluated in detail during the Feasibility Study.

The Treatability Study, which is to be performed by Kerr-McGee, includes the following laboratory investigations to evaluate cleanup methods for groundwater, soil and sediment:

### **1) Groundwater:**

**Natural Attenuation** - Natural attenuation involves the breakdown of the contaminants in groundwater by natural processes.

**Oxidation** - Oxidation technology involves adding a non-hazardous chemical, such as baking soda, to produce oxygen in groundwater to help breakdown contaminants by natural processes.

**Zero-Valent Iron** - Iron serves as the reaction medium for certain contaminants. Breakdown of the contaminants occurs when the contaminants react with the bed of zero-valent iron reducing the contaminants to carbon dioxide and water.

**Biodegradation** - Biodegradation utilizes chemical agents that produce and maintain an environment with no free oxygen in the groundwater. This environment allows for the growth of microbes that can breakdown contaminants.

### **2) Soil:**

**Stabilization Technologies** - Stabilization involves stopping the movement of contaminants.

**Bioremediation** - Bioremediation includes the addition of microorganisms in a mixed environment. The growth of the microorganisms will lead to the breakdown, either directly or indirectly, of the contaminants.

### **3) Sediment:**

**Stabilization Technologies** - Stabilization involves stopping the movement of contaminants.

Oxidation - Oxidation technology involves adding an oxidizer to the sediment which results in breakdown or destruction of contaminants.

Soil Washing - Soil washing uses chemical and physical separation processes to bring together and/or separate the contaminants from the soil particles.

## Next Steps



In order for the public to better understand the actions to be taken at this Site, the following is a brief outline of some of the key actions, which will occur between now and conclusion of Site cleanup:

- \* EPA reviews and approves the draft Remedial Investigation Report (dated July 2003), the Human Health Risk Assessment (dated September 2003) and the Ecological Risk Assessment (dated September 2003)
- \* EPA reviews and approves the Treatability Study - Soil Addendum (dated August 2003)
- \* Kerr-McGee implements the Treatability Studies for groundwater, soil and sediment
- \* Kerr-McGee submits the Treatability Study Report
- \* EPA reviews and approves the Treatability Study Report
- \* Kerr-McGee submits the Feasibility Study
- \* EPA reviews and approves the Feasibility Study
- \* EPA drafts the Proposed Plan, which will contain the preliminary cleanup method(s) for the Site
- \* EPA publishes a notice regarding the Proposed Plan and takes public comments
- \* EPA writes the Record of Decision, which formalizes the cleanup method(s) and includes the response to comments on the proposed plan

- \* An agreement is negotiated with Kerr-McGee to implement the Record of Decision
- \* Kerr-McGee submits the Remedy Design for the cleanup method listed in the Record of Decision
- \* EPA reviews and approves the Remedy Design
- \* Kerr-McGee implements, under EPA oversight, the Remedy Design
- \* Kerr-McGee implements, under EPA oversight, any Operation and Maintenance actions for the remedy.

## Community Advisory Group

The EPA and Kerr-McGee are strongly committed to keeping the local community informed about activities at this Site. Pursuant to the 2000 Administrative Order on Consent, Kerr-McGee entered into a separate agreement with Fresh Ministries, Inc., a non-profit community organization, to help the community understand the work being done at the Site.

### **Fresh Ministries, Inc.**

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The Technical Advisor to Fresh Ministries is:

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# EPA Contacts/Repository

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## **Community Involvement Coordinator**

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## **Local Document Repository**

Jacksonville Public Library

Eastside Branch

1390 Harrison Street

Jacksonville, Florida 32206

(904) 630-5466 (or 5467)



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**ENVIRONMENTAL PROTECTION AGENCY**

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PENALTY FOR PRIVATE USE, \$300

**KERR-MCGEE  
FACT SHEET  
WHAT'S INSIDE???**

**Site Background  
Enforcement Actions  
RI Update/FS Update  
Next Steps  
Contact Information**